

## CLAIMS

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1. An isolated polypeptide comprising an amino acid sequence which has at least 85%  
5 identity to an amino acid sequence selected from the group consisting of: SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8.
2. An isolated polypeptide as claimed in claim 1 in which the amino acid sequence has at least 95% identity to the amino acid sequence selected from the group consisting of: SEQ  
10 ID NO:2, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8.
3. The polypeptide as claimed in claim 1 comprising the amino acid sequence selected from the group consisting of: SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8.  
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4. An isolated polypeptide of: SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:6 or SEQ ID NO:8.
5. An immunogenic fragment of the polypeptide as claimed in any one of claims 1 to 4 in  
20 which the immunogenic activity of said immunogenic fragment is substantially the same as that of the polypeptide of: SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:6 or SEQ ID NO:8.
6. An isolated polynucleotide comprising a nucleotide sequence encoding a polypeptide  
25 that has at least 85% identity to the amino acid sequence of SEQ ID NO:2,4,6 or 8 over the entire length of SEQ ID NO:2,4,6 or 8 respectively; or a nucleotide sequence complementary to said isolated polynucleotide.

7. An isolated polynucleotide comprising a nucleotide sequence that has at least 85% identity to a nucleotide sequence encoding a polypeptide of SEQ ID NO:2,4,6 or 8 over the entire coding region; or a nucleotide sequence complementary to said isolated polynucleotide.

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8. An isolated polynucleotide which comprises a nucleotide sequence which has at least 85% identity to that of SEQ ID NO:1,3,5 or 7 over the entire length of SEQ ID NO:1,3,5 or 7 respectively; or a nucleotide sequence complementary to said isolated polynucleotide.

10 9. The isolated polynucleotide as claimed in any one of claims 6 to 8 in which the identity is at least 95% to SEQ ID NO:1,3,5 or 7.

10. An isolated polynucleotide comprising a nucleotide sequence encoding the polypeptide of SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:6 or SEQ ID NO:8.

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11. An isolated polynucleotide comprising the polynucleotide of SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:5 or SEQ ID NO:7.

12. An isolated polynucleotide comprising a nucleotide sequence encoding the polypeptide of SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:6 or SEQ ID NO:8 obtainable by screening an appropriate library under stringent hybridization conditions with a labeled probe having the sequence SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:5, SEQ ID NO:7 or a fragment thereof.

20 13. An expression vector or a recombinant live microorganism comprising an isolated polynucleotide according to any one of claims 6 to 12.

25 14. A host cell comprising the expression vector of claim 13 or a subcellular fraction or a membrane of said host cell expressing an isolated polypeptide comprising an amino acid

sequence that has at least 85% identity to the amino acid sequence selected from the group consisting of: SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8.

15. A process for producing a polypeptide comprising an amino acid sequence that has at least 85% identity to an amino acid sequence selected from the group consisting of: SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8 comprising culturing a host cell of claim 14 under conditions sufficient for the production of said polypeptide and recovering the polypeptide from the culture medium.

16. A process for expressing a polynucleotide of any one of claims 6 to 12 comprising transforming a host cell with the expression vector comprising at least one of said polynucleotides and culturing said host cell under conditions sufficient for expression of any one of said polynucleotides.

17. A vaccine composition comprising an effective amount of the polypeptide of any one of claims 1 to 5 and a pharmaceutically acceptable carrier.

18. A vaccine composition comprising an effective amount of the polynucleotide of any one of claims 6 to 12 and a pharmaceutically effective carrier.

19. The vaccine composition according to either one of claims 17 or 18 wherein said composition comprises at least one other *Neisseria meningitidis* antigen.

20. An antibody generated against the polypeptide or immunological fragment as claimed in any one of claims 1 to 5.

21. A method of diagnosing a *Neisseria meningitidis* infection, comprising identifying a polypeptide as claimed in any one of claims 1 to 5, or an antibody that is immunospecific

for said polypeptide, present within a biological sample from an animal suspected of having such an infection.

22. Use of a composition comprising an immunologically effective amount of a  
5 polypeptide as claimed in any one of claims 1 to 5 in the preparation of a medicament for use in generating an immune response in an animal.

23. Use of a composition comprising an immunologically effective amount of a  
10 polynucleotide as claimed in any one of claims 6 to 12 in the preparation of a medicament for use in generating an immune response in an animal.

24. A therapeutic composition useful in treating humans with *Neisseria meningitidis*  
disease comprising at least one antibody directed against the polypeptide of claims 1 to 5  
and a suitable pharmaceutical carrier.

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